



Environmental Protection Department

Our Mission is to protect, monitor, restore, and regulate Morongo's natural resources, honoring and protecting all life, land, and traditions and enhancing tribal sovereignty. We will promote environmental awareness and environmentally considerate actions by exemplifying environmental stewards, fostering collaborative relationships, expanding education and outreach activities, and continuing to enrich and develop our programs.

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Reinstating the School Flag Program

Written by: Isabel Hughes, Administrative Assistant



The Tribal Air Program is proud to announce that the school flag program is going to be reinstated at Morongo's campuses!

The school flag program is a way to notify the surrounding community of the Air Quality Index (AQI) for the day. There are five different flags which correspond with a color which tells onlookers how clean or polluted the air is. These flags can be a helpful tool for those in the community who are sensitive to air pollution. The table on the left depicts what each flag color represents.

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Every school day, there will be a flag flown to designate the air quality for the day. This program allows the schools to be alerted on the air quality and aids in the ability to take action to protect students' health. This is a great way to get students involved with learning about the environment and how air quality can impact their health.

On the days when school is not in session, you can visit our website, www.morongoir.com, to view the air quality index around the Morongo reservation!

To learn more about the Air Quality Index, visit www.airnow.gov!



Morongo Air Quality School Flag Program	
Air Quality Index	What you should do:
 green GOOD	Great day to be active outside!
 yellow MODERATE	Good day to be active outside! Sensitive students should take it easy.
 orange UNHEALTHY FOR SENSITIVE GROUPS	OK to be outside for short activities. Don't forget to take breaks. Watch for coughing or shortness of breath.
 red UNHEALTHY	Consider moving activities indoors. Any outdoor activities should be less intensive with more breaks.
 purple VERY UNHEALTHY	Move all activities indoors or reschedule outside play to another day.



How to Recycle... Glass

Written by: Jessica Southard, Environmental Specialist I



How is glass recycled

recycled

in the curbside system?

1 Mixed recycling is collected from curbside bins



2 Once at the recycling sorting center (MRF), glass is sorted out from other recyclables



3 It's sent to a glass processing plant to be sorted by color, crushed, cleaned, and labels & lids are removed.

The final result: glass cullet

Glass Ingredients

Cullet



4 The cullet is sent to manufacturers where it is mixed with glass ingredients to create new glass containers.

Image from www.lassoloop.com/lasso-life/why-glass-recycling-needs-a-makeover

Recycling can get confusing, but we're attempting to help answer your questions. Glass is 100% recyclable, and can be recycled endlessly without loss in quality or purity. Recycling glass containers saves energy, conserves resources, and diverts this valuable resource from landfills. A glass container can go from a recycling bin to a store shelf in as little as 30 days. An estimated 80% of recovered glass containers are made into new glass bottles.

Here are the do's and don'ts of putting your glass items in your curbside recycle bin.

- **RECYCLE** – Glass Bottles & Jars that are clean and rinsed with NO food debris
- **DO NOT RECYCLE** – Mirrors, Window Glass, Light Bulbs, Broken Glass, Ceramic Items, Clay Pots, Crystal Glasses, Heat-resistant Ovenware, and Containers with food debris
- Make sure to separate metal or plastic lids from containers, and place in recycle bin. Remove and dispose of corks and caps that are smaller than your hand.

If you still have questions about glass recycling, contact your Environmental Protection Department at 951-755-5128.



References: Glass Packaging Institute —Glass Recycling Facts <https://www.gpi.org/recycling>

Upcoming Event



Morongo Environmental
Protection Department

Pollution Prevention Program

Annual Community Declutter & Recycle Event!

Overwhelmed by an overstuffed home? Not sure how to properly dispose of medications and electronics? Join us for our Annual Community Declutter & Recycle Event!

Wednesday, January 17, 2024

9am — 1pm

Community Center - Parking Lot

EVENT SERVICES

- Document Shredding
- Electronic Waste Recycling
- Clothing & Small Household Goods Donations*
- Medication Disposal**
- General Recycling

BRING YOUR

- Documents & CDs for shredding
- Electronic Waste, Batteries, Light Bulbs, & Printer Ink
- Clothing & Shoe Donations (*for Goodwill)
- Unwanted Medications (**no Controlled Substances)
- Recyclables



Open to Morongo Community and Employees

This flyer was printed on
100% Post-Consumer
Recycled Paper

MORONGO BAND OF MISSION INDIANS
ENVIRONMENTAL PROTECTION DEPARTMENT
12700 Pumarra Rd, Banning, CA 92220
951-755-5128 - p2@morongo-nsn.gov



Erosion and Water Quality

Written by: Kimberly Miller, Environmental Specialist II

Erosion occurs when wind or water wears away at soil and rock, making it detach and move. Erosion is responsible for the dirt in the roadway after a heavy storm or the collapsing bank of a high volume stream. Although this is a natural process, there are things we do that make it worse and create problems for us and the environment. Concrete and asphalt, bare dirt, or areas with no vegetation all contribute to increased erosion.

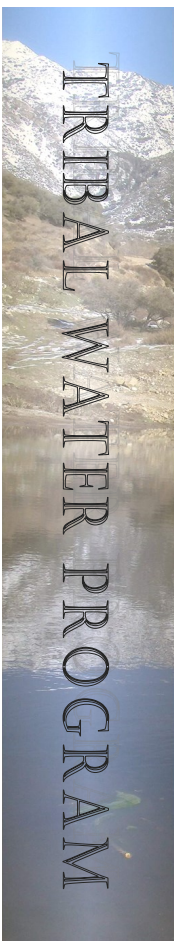
At Morongo, problems with erosion can be hidden for most of the year since we do not get a lot of rain. This means that many of the paths of water, such as intermittent streams or natural drainage ways, are dry and hard to identify until there is a storm event with enough rain to make them flow. Altering waterways with pavement or other impermeable surfaces can make water flow even faster than it would naturally. Faster water increases erosion. While hard surfaces reduce erosion at the site, it can create significant problems downstream when the water flows over loose soils. Last winter's storms brought a lot of attention to the magnitude of damage flooding and erosion can do.



Erosion can be a problem by increasing sediment in waterways, moving contaminated soil into streams, and creating unstable slopes that are in danger of collapsing. Increased sediment in waterways can change the natural levels and can cause imbalance in the aquatic ecosystem. This can eliminate habitats, such as pools, that some aquatic animals rely on as habitat or impair photosynthesis by plants through reducing water clarity and the amount of sunlight that can reach aquatic plants. The gills of aquatic animals can also be clogged, which limits their ability to take in oxygen. Much of the soil that runs off of roads or yards contains chemical contaminants that can pollute water quality. Pollutants such as oil, pesticides, or fertilizers that may be applied or leaked in small amounts on the ground can add up when all of the soil that has been collecting these contaminants is washed away at once. These substances are health hazards and can poison aquatic life. In addition to harming aquatic life, erosion can be hazardous to people. When roads are in the path of erosion they can become covered in water, dirt, and rocks that are unsafe to drive over. Hillsides that become heavily eroded can contribute to debris flow when there is a large storm.

There are many things you can do to help prevent erosion at home. Sand bags, silt fencing, and straw wattles are temporary controls to trap sediment and let water through during storm events. If there is an area around your home that water naturally flows through, try to keep it free of loose soil by adding vegetation, mulch, or gravel that slows down the water flow. The most effective thing you can do is to maintain or increase the vegetative cover on the land. Plant roots help to hold soil in place. Plants can also slow down water and act as a filter for some contaminants. If you are adding plants to your yard, look for native vegetation that is adapted to the area. Native plants can not only help with erosion, but they are easier to maintain, use less water, and provide wildlife food and habitat.

References: USEPA—Nonpoint Source: *Hydromodification and Habitat Alteration* <https://www.epa.gov/nps/nonpoint-source-hydromodification-and-habitat-alteration>; USEPA—Nonpoint Source: *Urban Areas* <https://www.epa.gov/nps/nonpoint-source-urban-areas>



Identifying Invasive Species

Written by: Micah Knox, Environmental Specialist I

At Morongo, our commitment extends to safeguarding a diverse spectrum of species residing on the reservation. The majority of these inhabitants are native species, shaped by the intricate processes of local natural evolution, with a presence in this region for millennia. However, alongside these natives, our responsibilities also encompass managing non-native or invasive species on the reservation. These intruders, introduced artificially, pose significant threats to their new environment, disrupting the delicate balance that native species have established over time. Their impacts range from causing disruptions in the food web to altering habitats, detrimentally affecting the landscape's ecological harmony.



Example of bull thistle commonly seen on the Morongo Reservation

To combat this challenge and maintain the integrity of our landscape, our efforts focus on actively monitoring and removing invasive species that encroach upon our environment. Among these problematic species are bull thistle and tree tobacco. Understanding how to identify these species is crucial in our conservation efforts.

Tree tobacco, scientifically referred to as *Nicotiana glauca*, stands tall with slender stems, adorned by bluish-green leaves, and crowned with tubular yellow flowers. Tree tobacco is native to South America but was introduced to California about 100 years ago. Despite its visually appealing qualities, this plant harbors high toxicity due to its nicotine content, posing threats to both humans and animals if ingested. Its adaptability across diverse climates has led to its classification as an invasive species in some regions, where it outcompetes native vegetation, disrupting the ecosystem's natural balance.

Bull thistle, scientifically known as *Cirsium vulgare*, boasts spiny foliage and striking purple-pink globe-like flowers. Originating from Europe and Asia, this biennial herbaceous plant has transcended continents, establishing itself as an invasive species in various regions. Its growth, reaching several feet in height, is characterized by deep taproots and coarse, prickly leaves adorned with sharp spines. While its vibrant flowers attract pollinators, its rapid spread poses a nuisance in agricultural lands and natural habitats, disrupting the local flora's balance.

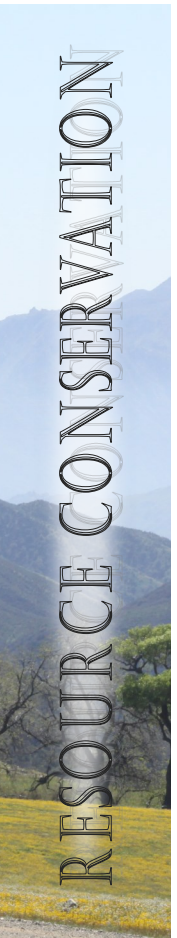


Example of tree tobacco commonly seen on the Morongo Reservation

Should you encounter these invasive species in nature, it's best to leave them in place. It can be hard to differentiate these species from native ones and sometimes removal can accidentally spread seeds. Our dedicated environmental department diligently conducts quarterly removals, identifying problematic areas around the reservation. Our efforts focus on the systematic elimination of invasive species, ensuring the well-being of native and

protected species, and restoring the ecological balance. By proactively managing these invasive threats, we endeavor to preserve the rich biodiversity and splendor of our reservation for generations to come. To help reduce invasive species, you can make sure to remove seeds that stick to your clothes/shoes when you are out in natural areas. Also avoid purchasing invasive species to use in your yard and make sure you are planting native species instead.

References: Nature Collective— Tree Tobacco (not native) <https://naturecollective.org/plant-guide/details/tree-tobacco-non-indigenous/>; Penn State Extension— Bull Thistle Identification and Management <https://extension.psu.edu/bull-thistle-identification-and-management>



Air Quality's Impact on the Asthma Community

Written by: Pamela Atcitty, Environmental Specialist II

Asthma is a long-term disease that makes it difficult to move air in and out of your lungs. Once triggered, the airways in the lungs swell and the airway begins to shrink. With asthma, the muscles around one's airways begin to tighten, and mucous that the body makes clogs up the airways. This tightness makes it difficult to breathe, causing symptoms such as wheezing, coughing and or shortness of breath. Asthma's triggers are usually the pollutants found in both our indoor and outdoor air, such as pollen, gases, smoke, and dust particles, and impact children differently than adult asthma patients.



Asthma rates drop as air quality improves in children.

Evidence in scientific research has proven that air pollution has different effects on both the adult and child asthmatic population, however, both are negative. The most recent research focused on Southern California, notorious for poor air quality due to smog, uncovered the relationship between levels of air pollution and the number of childhood asthma cases and revealed that communities with declining air pollutants corresponded with declining rates of asthma cases. Over more than two decades, data in these studies was collected to track changes in air quality improvement and asthma occurrences in thousands of children in Southern California. Surveys tracked changes in the participants' health and air pollution levels were monitored in each of the study communities. The analysis spanned nine Southern California communities and included

over 4,000 children and found that the number of children who developed asthma went down as levels of nitrogen dioxide and particulate matter in the air went down too. On average, the researchers found a 20 percent reduction in total asthma rates. This finding was consistent with previous research showing that nitrogen dioxide and particulate matter, both contributing to smog and being released by cars and burning fossil fuels, have the greatest impact on asthma development in children. In contrast, a causal relation between air pollution and the development of adult asthma has not been established, however, what has been revealed is that adult exposure to outdoor pollutants can *induce* asthma symptoms, decreases in lung function, and exacerbations. What has also been uncovered is that adults who are active tobacco smokers tend to have poorer asthma control, exposing themselves to second-hand smoke and increasing the risk of asthma exacerbations, respiratory symptoms, and healthcare utilization. Other indoor pollutants such as heating sources and molds can also negatively impact the course of asthma in adult asthmatic patients.



Second hand smoke induces asthma

Research has concluded that there have been successful efforts to reduce air pollution and with it comes health benefits, however global measures, that aim to reduce exposure to air pollutants, are highly needed to improve the outcomes and management of adult and pediatric asthma.

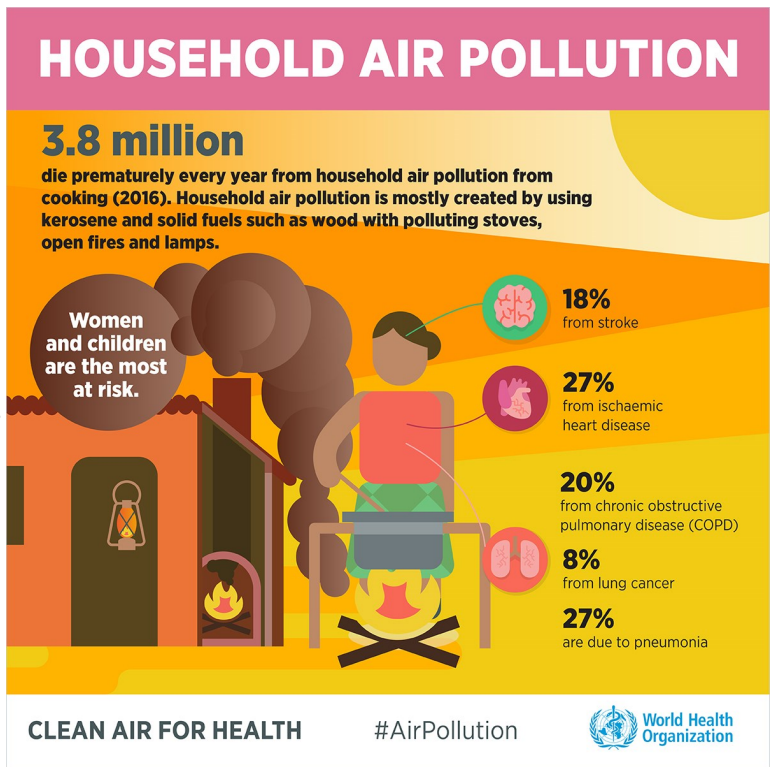
References: *Impact of Air Pollution on Asthma Outcomes.* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7503605/>

Tips for Healthy Indoor Air

Written by: Lina Luu, Environmental Specialist I

A key component to a healthy home is to have good indoor air quality. According to EPA, “Indoor Air Quality (IAQ) refers to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants.” When IAQ is bad, you may feel some immediate effects, such as: irritation in your eyes, throat, and nose, headaches, dizziness, and even fatigue. Long-term exposure may lead to respiratory diseases, heart disease, and cancer. Some sources for indoor pollution include fuel-burning combustion appliances, central heating and cooling systems, mold, and cleaning supplies.

Since outdoor air is bound to enter your home (through natural or mechanical ventilation and infiltration), you should be aware of the outdoor sources of pollution as well. Outdoor polluting sources you may find close to your home include radon, pesticides, and air pollution from the surrounding area. Although the outdoor air might not be the best, it is still good to have adequate ventilation. When there is not enough ventilation, pollutants are more likely to accumulate within the home.



EPA provides an interactive tour which allows users to learn about common pollutants found throughout a house. Please go to <https://www.epa.gov/indoor-air-quality-iaq/interactive-tour-indoor-air-quality-demo-house> to find out more.

The first step you can take to improve your indoor air quality is to control the sources of pollution or reduce their emissions. You can switch from hazardous chemicals for household cleaning to “green cleaning” products, eliminate tobacco smoke from the indoor environment, and consider alternative heating sources if you have wood or coal burning stoves (or use the best practices for these stoves).

Ventilating your home where moisture is likely to accumulate is another way to create a healthier indoor environment. Examples of source ventilation can be seen in bathrooms and kitchen range hoods, which vent to the outside. Naturally ventilating your home can be as simple as opening a window or door or turning on exhaust fans.

The final strategy that can assist in your journey to a healthier home is using air cleaners. Air cleaners should be considered after proper source control and ventilation has been applied.

References: EPA.gov—Introduction to Indoor Air Quality <https://www.epa.gov/indoor-air-quality-iaq/introduction-indoor-air-quality>



Upcoming Events

Morongo Reuse Center



Friday
January 19, 2024
9am to 12pm
Behind Public Works

Donate usable household items or take what you need for FREE.

Open to Morongo Residents & Tribal Members Only

- Cleaning Products
- Paints
- Electronics
- Lawn Care
- Vehicle Care
- Pool Care

Household Hazardous Wastes Drop-Off



Friday
January 19, 2024
9am to 12pm
Behind Public Works

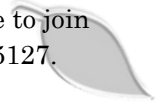
Staff available on-site to collect, sort, and store materials. Wear a mask.

Open to Morongo Residents & Tribal Members Only

- Cleaning Products
- Paints
- Pesticides
- Oil & Antifreeze
- Sharps & Medication
- Batteries
- Electronics
- Bulbs



This and previous newsletters are available at <https://morongonation.org/environmental/>. If you would like to join our email list or would like a hard copy mailed to you, let us know at epd@morongo-nsn.gov or 951-755-5127.



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